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Geographic And Genetic Population Differentiation Of The Amazonian Chocolate Tree (*Theobroma cacao* L.)

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Numerous collecting expeditions of *Theobroma cacao* L. germplasm have been undertaken in Latin-America. However, most of this germplasm has not contributed to cacao improvement because its relationship to cultivated selections was poorly understood. Germplasm labeling errors have impeded breeding and confounded the interpretation of diversity analyses. To improve the understanding of the origin, classification, and population differentiation within the species, 1241 accessions covering a large geographic sampling were genotyped with 106 microsatellite markers. After discarding mislabeled samples, 10 genetic clusters, as opposed to the two genetic groups traditionally recognized within *T. cacao*, were found by applying Bayesian statistics. This leads us to propose a new classification of the cacao germplasm that will enhance its management. The results also provide new insights into the diversification of Amazon species in general, with the pattern of differentiation of the populations studied supporting the palaeoarches hypothesis of species diversification. The origin of the traditional cacao cultivars is also enlightened in this study.

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